

REMARKS

Claims 1-5, 7-10, 12-14, and 16-19, including amended claims 1, 8-10, 13, and 17-19, appear in this application for the Examiner's review and consideration. Claim 1 has been amended to recite the features of claims 6 and 11, and claims 6 and 11 have been canceled without prejudice. Claims 8-10, 13, and 17-19 have been amended, and claims 15 and 20 have been canceled to be consistent with amended claim 1. A marked up version of the amended claims, showing insertions and deletions, is attached as Appendix A. A clean version of the pending claims is attached as Exhibit B.

Claim Rejections- 35 U.S.C. § 112

The Examiner rejected claims 1-20 under the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In response, claims 1 and 8 have been amended to clarify grammatical and or translational discrepancies. In light of these claim amendments, Applicants respectfully submit that the indefiniteness rejection has been overcome.

Claim Rejections- 35 U.S.C. § 102

Claims 1-5, and 7-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,237,893 to Ryder *et al.* (the "Ryder patent"). Applicants disagree.

The Ryder patent does not disclose, teach or suggest *a spring wire* as recited in amended claim 1. Instead, the Ryder device uses a retention means 44 made of a resiliently compressible material, not spring wire. As explained in the background section of the present application, this arrangement requires more material to be removed from the perimeter of the shaft of the screw driver. Such a construction can weaken the cross-section of the shaft, particularly when using smaller screws.

As the features recited in claim 1 are not disclosed, taught or suggested by the Ryder patent, Applicants submit that this claim is allowable over the cited reference. With respect to claims dependent from claim 1, Applicants submit that, because these claims define more particular aspects of Applicants' invention (as well as including the features of claim 1), they are also patentably distinguished over the Ryder patent for the above reasons, as well as the totality of the claimed invention.

Claim Rejections- 35 U.S.C. § 103

Claims 6, and 13-20 were rejected under 35 U.S.C. § 103(a) as being obvious in view of the Ryder patent, and claims 11 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Ryder patent in view of U.S. Patent No. 1,951,652 to Fedotoff (the “Fedotoff patent”).

The Fedotoff patent does not disclose, teach or suggest a *groove and borehole flush with one of a plurality of rounded edges* of a spindle having a substantially polygonal-shaped cross-section. Instead, the Fedotoff device is directed toward a plain flathead screwdriver with a slot extending down the center of the face of the blade, away from the outer portions. In fact, the Fedotoff patent teaches away from providing a groove and borehole flush with an edge. For example, the Fedotoff patent teaches that the slot in the blade is cut with the “principal consideration to maintain the strength and rigidity of the outer portions of the blade; and *no material is removed from the outer blade portions* by the arrangement of this invention.” (Column 2, lines 99-107 (*emphasis added*)). Accordingly, there is no likelihood of successfully creating the claimed invention by combining the teachings of the Fedotoff and Ryder patents, because the Fedotoff patent teaches away from removing material from the outer blade portions and away from providing a groove and borehole flush with an edge. Moreover, even if these teachings were combined, it still would not yield the invention with all of the features as recited in amended claim 1. Thus, Applicants submit that claim 1 is patentable over the Fedotoff and Ryder patents, alone or in combination. With respect to claims dependent from claim 1, Applicants submit that, because these claims define more particular aspects of Applicants’ invention (as well as including the features of claim 1), they are also patentably distinguished over the Ryder and Fedotoff patents for the above reasons, as well as the totality of the claimed invention.

Conclusion

In view of the foregoing amendments and remarks, it is believed that all rejections have been overcome and should be withdrawn. Thus, all current claims are submitted to be in condition for allowance, early notice of which would be appreciated. If the Examiner does

not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and accelerate the eventual allowance of the claims.

A fee for an extension of time is believed to be due for this submission and a petition for extension of time is submitted concurrently herewith. Should any additional fees be required, however, please charge such fee to Pennie & Edmonds LLP Deposit Account No. 16-1150.

Respectfully submitted,



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Enclosure

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Appendix A
Marked Up Version of Amended Claims

1. (Amended) A device for securing a screw comprising:
a longitudinal shank having a central axis and rear and front ends;
a spindle, located at the front end of the longitudinal shank and concentric to the central axis, having front and rear ends, a substantially polygonal-shaped cross-section with a plurality of rounded edges and a plurality of concave side surfaces, a groove substantially parallel to the central axis, and a borehole [flush] coextensive with the groove [concentric to the central axis]; and
a[n elastic component] spring wire having top and bottom ends, with the bottom end inserted into the borehole and the top end inserted into the groove,
wherein the [elastic component] spring wire projects transversely to the central axis across the cross-section when unstressed, the spindle is received into a screwhead aperture of the screw, and the screw is secured into position upon stress to the [elastic component] spring wire, and wherein the groove and the borehole are flush with one of the plurality of rounded edges.
8. (Amended) The device of claim 1, wherein the [elastic component] spring wire [can bend elastically] is bendable substantially perpendicular to the central axis.
9. (Amended) The device of claim 1, wherein the top end of the [elastic component] spring wire is fixed in the groove.
10. (Amended) The device of claim 9, wherein the top end of the [elastic component] spring wire is bonded, soldered, or clamped into the groove.
13. (Amended) A method of securing a screw while implanting into a body comprising:
providing a screw having an aperture in a screwhead;

providing the device of claim 1; and
inserting the spindle into the aperture resulting in stress to the [elastic component] spring wire,
wherein upon application of the stress, the [elastic component] spring wire holds the screw in a steady position.

17. (Amended) The method of claim 13, wherein the [elastic component] spring wire [can bend elastically] is bendable substantially perpendicular to the central axis.

18. (Amended) The method of claim 13, wherein the top end of the [elastic component] spring wire is fixed in the groove.

19. (Amended) The method of claim 18, wherein the top end of the [elastic component] spring wire is bonded, soldered, or clamped into the groove.

Appendix B
Clean Version of Pending Claims

1. (Amended) A device for securing a screw comprising:
a longitudinal shank having a central axis and rear and front ends;
a spindle, located at the front end of the longitudinal shank and concentric to the central axis, having front and rear ends, a substantially polygonal-shaped cross-section with a plurality of rounded edges and a plurality of concave side surfaces, a groove substantially parallel to the central axis, and a borehole coextensive with the groove; and
a spring wire having top and bottom ends, with the bottom end inserted into the borehole and the top end inserted into the groove,
wherein the spring wire projects transversely to the central axis across the cross-section when unstressed, the spindle is received into a screwhead aperture of the screw, and the screw is secured into position upon stress to the spring wire, and wherein the groove and the borehole are flush with one of the plurality of rounded edges.
2. The device of claim 1, wherein the rear end of the longitudinal shank is configured and dimensioned to be received into a motor-driven screwdriver.
3. The device of claim 1, wherein the rear end of the longitudinal shank is configured and dimensioned to be received by a screwdriver.
4. The device of claim 1, wherein the shank has a first diameter and the spindle has a second diameter less than the first diameter.
5. The device of claim 1, wherein the spindle has a hexagonal shape.
7. The device of claim 1, wherein the groove and the borehole are flush with one of the plurality of concave side surfaces.

8. (Amended) The device of claim 1, wherein the spring wire is bendable substantially perpendicular to the central axis.

9. (Amended) The device of claim 1, wherein the top end of the spring wire is fixed in the groove.

10. (Amended) The device of claim 9, wherein the top end of the spring wire is bonded, soldered, or clamped into the groove.

12. The device of claim 11, wherein the spring wire has a width of 2 mm.

13. (Amended) A method of securing a screw while implanting into a body comprising:

providing a screw having an aperture in a screwhead;

providing the device of claim 1; and

inserting the spindle into the aperture resulting in stress to the spring wire, wherein upon application of the stress, the spring wire holds the screw in a steady position.

14. The method of claim 13, wherein the screw is a bone or pedicle screw.

16. The method of claim 13, wherein the groove and the borehole are flush with one of the plurality of concave side surfaces.

17. (Amended) The method of claim 13, wherein the spring wire is bendable substantially perpendicular to the central axis.

18. (Amended) The method of claim 13, wherein the top end of the spring wire is fixed in the groove.

19. (Amended) The method of claim 18, wherein the top end of the spring wire is bonded, soldered, or clamped into the groove.